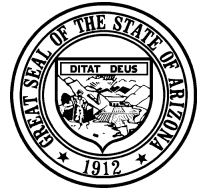


**ARIZONA DEPARTMENT OF WATER RESOURCES
SURFACE WATER MANAGEMENT DIVISION**

Dam Safety Section

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ARIZONA'S PROGRAM FOR SAFETY OF DAMS

Program Objective

The Arizona Revised Statutes (A.R.S.) 45-1201 assign the responsibility for supervision of the safety of dams to the Director of the Arizona Department of Water Resources (Department). The Dam Safety program objective is to maximize the protection of the public against loss of life and property by reducing the likelihood of catastrophic failure of dams within the Department's jurisdiction. This goal is achieved by maintaining a Dam Safety Section within the Department staffed by technical specialists trained and experienced in the design, construction, operation, and maintenance of dams. Dam safety staff requires that current dam safety standards be met during the design review, new construction, enlargement, repair, alteration, operation and maintenance, and removal of dams within jurisdiction.

Program Description

A.R.S. 45-1201 defines a dam, defines dam safety procedures, and gives regulatory control to the Arizona Department of Water Resources. Detailed rules for dam safety procedures are included in A.A.C. R12-15-1201 et seq. which were approved June 12, 2000. The rules were developed to facilitate and provide guidelines for the safe design, construction, operation, maintenance, and removal of dams in jurisdiction.

Arizona's Program for Dam Safety has existed since 1929. Prior to 1971, funding for the program was minimal and sporadic. Legislative approval of a consistent budget since 1971 has authorized permanent staffing and the development of a comprehensive dam safety program.

The statutes and rules define a dam as an artificial barrier over 25 feet in height or capable of storing more than 50 acre-feet of water. Appurtenant works are included in jurisdiction. Exemptions exist for artificial barriers of small height or reservoir volume and for certain classifications of artificial barriers. Generally dams owned and/or operated by the Federal government are exempt from State jurisdiction.

Currently, there are approximately 209 dams within jurisdiction. Nineteen are concrete, roller-compacted concrete, or masonry. The remaining dams are earthfill and/or rockfill with the exception of one inflatable dam. The average dam is 40 feet high and stores approximately 3000 acre-feet of water. City, County and State governments own approximately 106 dams. Private corporations and individuals own approximately 76 and water development and irrigation districts own approximately 29 dams. Jurisdictional size dams located in Arizona, which are exempt from the Department's jurisdiction, include approximately 65 Federal dams, 34 mineral mine tailing dams, and 110 dams owned by Indian tribes.

The Dam Safety Section is responsible for the safety of all jurisdictional dams in Arizona. The Section reviews and approves applications required for proposed new dams, as well as enlargements, repairs, alterations, and removal of existing dams. The Section also monitors and approves the construction for new dams, and the enlargements, repairs, alterations, and removal for existing dams. The Section inspects and evaluates operating dams to determine if safety deficiencies exist, and guides and approves owner's actions to correct safety deficiencies. The statutory authority for the tasks performed within the safety of dams program is found in ARS §§ 45-105 et seq. and 45-1201 et seq.

Arizona dam safety law includes the major areas suggested by the United States Committee on Large Dams and the National Dam Safety Program Act. The State has the authority to: (1) review, require modifications, and approve plans to construct dams; (2) perform periodic inspections of construction; (3) issue licenses to operate; (4) investigate each dam at least every 5 years; (5) issue orders as needed to correct deficiencies; (6) adopt rules; and (7) require emergency action plans.

The downstream hazard potential of each dam and the availability of staff dictate the frequency of operations and maintenance (O&M) inspections. The current schedule includes inspecting high hazard dams annually, significant hazard dams every three years, with low and very low hazard dams every five years. Although dams which qualify as release-contained barriers are exempt, A.R.S. 45-1202(E) gives the Director the right to conduct inspections to verify the release-contained barrier exemption.

Reservoir spillway capacity requirements utilize a combined rating of size and hazard potential to define the required minimum Inflow Design Flood (IDF). The IDF ranges from the 100-year event for Very Low Hazard dams of all sizes to the full Probable Maximum Flood (PMF) for High Hazard dams of all sizes when the number of persons at risk exceeds 300.

In 1988, the legislature established a dam repair fund designed to provide the Department the money necessary to initiate emergency actions associated with an imminent dam failure. Money expended by the Department on an emergency action is to be reimbursed by lien money recovered from the owner of the dam. The Director may loan and/or grant money from the fund to help owners make repairs to unsafe dams. Fees for applications and dam inspections are deposited into this fund. In 1988, the legislature also provided \$2.5 million to this fund for the repair of two unsafe dams in Apache County. In 1998 the legislature increased enforcement powers by providing for hearings and allowing civil penalties to be imposed. A person who violates Arizona Dam Safety law is guilty of a class 2 misdemeanor, and each day constitutes a separate offense. The Director may assess a civil penalty in an amount not to exceed one thousand dollars per day of violation.

The Dam Safety Section maintains and updates a standard information packet regarding Arizona's safety of dams program, including information related to filing an Application. If you would like a copy of the Information Packet or have any questions regarding Arizona's Program for Safety of Dams, please contact the Dam Safety Section at (602) 417-2445.